

Notice of Allowability

Application No.

10/771,577

Examiner

Farras Abdelnour

Applicant(s)

KADATCH, ANDREW

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Phone interview, November 1, 2007.
2. ☒ The allowed claim(s) is/are 1-17, 19-29 and 31-33.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>Attached</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Examiner's Amendment and Allowance

Claim Rejections - 35 USC § 101

1. Rejection of claim 14 under 35 USC 101 has been withdrawn. Rejection of claim 1 has been withdrawn subject to amendments below. Claims 29 and 31 allowed as amended below.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Bhavani Ravaprolu on November 11, 2007.

The application has been amended as follows:

Claim 1:

Line 3, replace "component" with -- processor --;

line 5, before "a compression component," add -- The processor executing --.

Claim 29:

Line 2, before "memory" insert -- computer readable --.

Claim 31:

“A computer readable medium having stored thereon computer executable components comprising:
(existing claim 1).”

Allowable Subject Matter

3. The following is a statement of reasons for the indication of allowable subject matter: Regarding claims 1, 14, 29, and 31, Ratnakar US 2002/000143 A1 (“Wavelet transform coding technique”) discloses a system that facilitates data compression, comprising:

a component that receives an N-dimensional image, where N is any integer from one to infinity (“This invention relates generally to an image compression/decompression technique,” page 1, [0003]); and a compression component that utilizes, at least in part, locally-adaptive, lossless palettization to facilitate compression of the N-dimensional image (“local-index coding uses a small palette specific to a single image block. If a block cannot be coded using global- or local-index coding, then that block is classified as a natural image block. The lossless coding technique itself is used to compress natural image blocks,” page 2, [0026]). Ratnakar does not disclose initializing an L size last recently used buffer, and does not disclose checking each macroblock line-by-line and pixel-by-pixel. Moreover, Ratnakar does not disclose setting masking bits if a line matches a previous line; setting masking bits if a pixel matches a previous pixel; creating a list of all pixel characteristics utilized in non-matching macroblock lines.

Regarding claims 1, 14, 29, and 31, Po *et al.* ("Block address predictive colour quantisation image compression," L.-M. Po, W.-T. Tan; Electronics Letters, Vol.30, Iss.2, 20 Jan 1994, Pages: 120-121) discloses a system that facilitates data compression, comprising:

a component that receives an N-dimensional image, where N is any integer from one to infinity ("Colour quantisation (CQ) [1-3] is, therefore, required for displaying these images on palette-based display systems," page 120, column 1);
and

a compression component that utilizes, at least in part, locally-adaptive, lossless palettization to facilitate compression of the N-dimensional image ("The basic idea of block address predictive colour quantisation coding (BAPCQC) is to apply the APCQC technique on an image sub-block and adaptively select the colour level for the image sub-block," page 120, second column). Po does not disclose initializing an L size last recently used buffer, and does not disclose checking each macroblock line-by-line and pixel-by-pixel. Moreover, Po does not disclose setting masking bits if a line matches a previous line; setting masking bits if a pixel matches a previous pixel; creating a list of all pixel characteristics utilized in non-matching macroblock lines.

Regarding claims 1, 14, 29, and 31, Sharpe *et al.* ("JPEG 2000 options for document image compression," L.H. Sharpe II and B. Manns, Proc. SPIE Int. Soc. Opt.

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Eng. 4670, 167 (2001)) discloses a system that facilitates data compression, comprising:

a component that receives an N-dimensional image, where N is any integer from one to infinity ("JPEG 2000 is a versatile standard with applicability to a wide variety of image types," page 167, section 1); and

a compression component that utilizes, at least in part, locally-adaptive, lossless palettization to facilitate compression of the N-dimensional image ("JPEG 2000 supports palettized images through the optional JP2 file format. The format includes provisions for an optional palette table that associates a color or gray value with each row of the table. Each row then implicitly represents an index value. No wavelet transform is applied; the entropy coder is used to losslessly compress the index values," page 169, section 3.2). Sharpe does not disclose initializing an L size last recently used buffer, and does not disclose checking each macroblock line-by-line and pixel-by-pixel. Moreover, Sharpe does not disclose setting masking bits if a line matches a previous line; setting masking bits if a pixel matches a previous pixel; creating a list of all pixel characteristics utilized in non-matching macroblock lines.

Regarding claims 1, 14, 29, and 31, A.J. Pinho *et al.* ("JPEG 2000 coding of color-quantized images," A.J. Pinho and A.J.R. Neves; ICIP. Proc. of International Conference on Image Processing, Vol.2, 14-17 Sept. 2003, Pages: II-181-4 vol.3) discloses a system that facilitates data compression, comprising:

a component that receives an N-dimensional image, where N is any integer from one to infinity ("Color-quantized images are usually represented by a matrix of indexes," page II-181, first column);
and

a compression component that utilizes, at least in part, locally-adaptive, lossless palettization to facilitate compression of the N-dimensional image ("Table 1 shows JPEG 2000 lossless compression results of the reordered index images, with the use of local histogram packing ("Packing" column) and without it ("Normal" column)," page II-182, second column). Pinho does not disclose initializing an L size last recently used buffer, and does not disclose checking each macroblock line-by-line and pixel-by-pixel. Moreover, Pinho does not disclose setting masking bits if a line matches a previous line; setting masking bits if a pixel matches a previous pixel; creating a list of all pixel characteristics utilized in non-matching macroblock lines.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farras Abdelnour whose telephone number is 571-270-1806. The examiner can normally be reached on Mon. - Thurs. 7:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian P. Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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FA



BRIAN WERNER
SUPERVISORY PATENT EXAMINER